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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TESKIN, FRED M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,376	Applicant(s) WERMTER ET AL.	
	Examiner Fred M. Teskin	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9,11-15 and 18 is/are allowed.
- 6) ☒ Claim(s) 1-6,8,10,11 and 16 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

This Office action is responsive to the reply filed on 25 September 2008. Per the reply, claims 1 and 8-11 have been amended, claims 7 and 17 have been cancelled and new claim 18 has been added. Accordingly, claims 1-6, 8-16 and 18 are currently pending and under examination.

In light of the amendments to claims 1, 9 and 11 which incorporate the limitations of claim 7 or claim 9, the rejection of claims 1-6 and 11-15 over Nesvadba as presented in the last Office action is withdrawn. However, upon further consideration, the indicated allowability of claim 7 (corresponding to amended claim 1) is withdrawn in view of the newly discovered prior art to Demme. Rejections based on the new reference follow.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1 is objected to because of the following informality: in the sixth line, the reference notation "II)" should be changed to --(II)-- for consistency in terminology (*cf.*, reference notation recited in subsequent line). Appropriate correction is required.

Claims 1-6, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3222334 (Demme).

Applicants' invention, as recited in claim 1, is a polymerizable composition comprising

- a) an ethylenically unsaturated monmer;
- b) a radical polymerization initiator; and
- c) a hydroxylamine, a nitron or an alkyl N-oxid having a molecular weight of more than 250 g/mol, where the hydroxylamine, the nitron and the alkyl N-oxid are of defined formulae (I), (II) and (III).

Demme is directed to N,N-dialkylhydroxyl amines as shortstopping agents for emulsion polymerization systems. Specific disclosure is provided to shortstopping the polymerization of butadiene with styrene by adding N,N-diisopropylhydroxylamine or N,N-diethylhydroxylamine to a polymerization recipe containing a specific type of free radical initiator (α,α' -azodi-isobutyronitrile) at a conversion level such that unreacted monomer(s) is still present in the reaction mixture; e.g., at 60.0 or 60.6 % conversion (see Example 4 and Table IV in cols. 5-6). The resultant latex would thus comprise species of applicants' components a) and b) together with other components such as styrene-butadiene elastomer, which are not excluded from the claimed composition given the open transition language of claim 1.

Examiner acknowledges that both N,N-diisopropylhydroxylamine and N,N-diethylhydroxylamine have molecular weights too low to qualify as applicants' component c), this being the essential difference between Demme and the claimed invention; nevertheless, because of availability, Demme teaches that N,N-dialkylhydroxylamines containing up to about 18 carbon atoms in each alkyl group will

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be used and mentions as specific compounds operable in the disclosed invention, N,N-di-decylhydroxylamine and N,N-dioctadecylhydroxylamine, along with nine other species including N,N-diisopropylhydroxylamine and N,N-diethylhydroxylamine (see col. 2, lines 42-60). Both N,N-di-decylhydroxylamine and N,N-dioctadecylhydroxylamine have a molecular weight above 250 g/mole (313 and 537, respectively) and each anticipates applicants' formula (I) when R_1 - R_4 are hydrogen and R_5 and R_6 are a C_{10} or a C_{18} alkyl, as per present claim 10.

Given the teaching of N,N-di-decylhydroxylamine and N,N-dioctadecylhydroxylamine as members of a relatively small genus of alternative shortstopping agents, there would have been a reasonable expectation of either performing equivalently to N,N-diethyl- or N,N-diisopropylhydroxylamine when added to an emulsion polymerization after the desired degree of conversion is reached. Motivated by an expectation of equivalent performance, it would have been obvious to one of ordinary skill in the art to modify Demme by adding N,N-di-decylhydroxylamine or N,N-dioctadecylhydroxylamine to the polymerization recipe disclosed in, e.g., Example 4 in lieu of the latter, lower molecular weight compounds. The result would be a reaction mixture comprising the requisite components of applicants' composition as defined in claims 1, 2, 4-6, 8 and 10. As to claim 3, addition of the disclosed N,N-dialkylhydroxylamines to the polymerization of monomers conforming to the claimed formula is at least suggested by Demme; see column 2, lines 20-27 where their use in the polymerization of acrylates, methacrylates and (meth)acrylamides is proposed. As polymers of these vinyl-type monomers have well known commercial utility, it would have been obvious to one of ordinary skill in the

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art to include such monomer in the recipe of Demme to which the aforementioned hydroxylamine is to be added upon reaching the desired degree of polymerization.

Claim 16 stands rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nesvadba.

The rejection is maintained substantially as indicated in the last Office action (see pages 3-4 thereof) and for the reasons which follow.

Applicants' arguments with respect to claim 16 have been fully considered but they are not persuasive.

From the remarks on page 11 of the reply, applicants' position appears to be that because process claim 11 has been amended to include the limitations of claim 9, which was objected to in the last Office action as being dependent upon a rejected base claim, but otherwise allowable, and because product-by-process claim 16 depends from claim 11, claim 16 must likewise be allowable.

Issue is taken with this position inasmuch as each statutory class of claims should stand on its own merits. A product produced by a novel and unobvious process is not necessarily patentable. See MPEP 2113 and cases cited therein. As noted in the prior Office action and not disputed by applicants, Nesvadba exemplifies use of initiator compounds meeting the claim 11 limitations as to minimum molecular weight and alkyl-N-O functionality to produce block copolymers having molecular weight parameters commensurate with the corresponding parameters of applicants' (co)polymers.

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Particularly as to Mn, Mw and PD, see Nesvadba Examples B13 and B15-B17 and *cf.* page 11, line 30 to page 12, line 2 of the present specification. In the absence of a showing that the instantly recited process necessarily results in a different polymer than those obtained by the processes exemplified by Nesvadba, the continued rejection of claim 16 is still deemed tenable and therefore must be maintained.

Claims 9, 11-15 and 18 are allowable on the present record.

In view of the new grounds of rejection, this action is made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fred M Teskin/

Primary Examiner, Art Unit 1796

FMTeskin/01-12-09